Preliminary Results for April 2022

The Vancouver Island Drug Checking Project delivers drug checking services in Victoria, BC. Our service has been operating in partnership with SOLID Outreach, AVI Health and Community Services, Lantern Services, Dr. Chris Gill and the team at Vancouver Island University, and the Island Health Authority. This free and confidential service provides information on composition of substances and harm reduction information.

Highlighted findings:

- Carfentanil was found in seven expected opioid-down samples, with a maximum concentration of 2.95%
- 93% of expected opioid-down samples contained fentanyl
- The median fentanyl concentration found was 11.0%, with a maximum of over 80%

495Samples Tested
1 - 30 April 2022

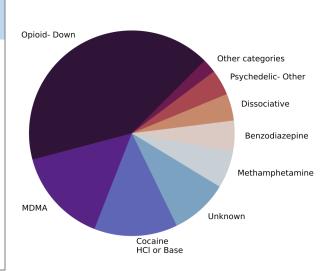
- Benzodiazepines and/or etizolam were found in 46.1% of expected opioid-down samples
- The maximum concentration of etizolam found was >25%, in an expected opioid-down sample
- Xylazine was found in eight expected opioid-down samples, with a median concentration of 21%

Read our blog for further interpretations of our April data.

What were people bringing to be tested?

Service users bring us a wide variety of substances that can be grouped into different drug classes. The table below aggregates the total number of samples we tested by their "expected" substance (i.e. the drug category reported by the service user). These data are visually represented in the pie chart below and are separated by collection location/method on the following page.

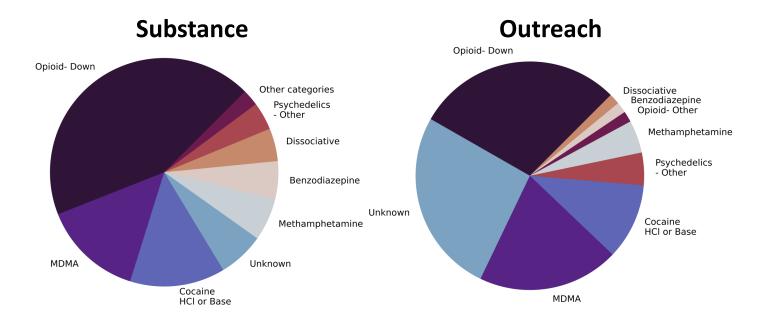
Expected substance	Number of Samples
Opioid Down (fentanyl and/or heroin)	206
Psychedelic (MDMA, MDA, LSD, 2C-B)	94
Cocaine (HCl or Base)	65
Methamphetamine	29
Benzodiazepine (alprazolam, diazepam, etizolam)	24
Dissociative (ketamine)	21
Other Opioids (Dilaudid, oxycodone)	3
Other (GHB, cannabinoids, "research chemicals")	8
Unknown/Missing	45



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What were people bringing to be tested by service model?

A majority of the samples that we check are brought in to our Victoria storefront by service users, however we also collect and receive samples though various outreach efforts. The "expected substance" data presented on the front page of this document can be separated by sample collection location/method, where "Substance" samples are those brought directly to our storefront, while "Outreach" samples are those collected at supported housing sites, at overdose prevention and supervised consumption locations, at events, through no contact drop-off envelopes, and via mail-in envelopes. These data are tabulated and visualized below.

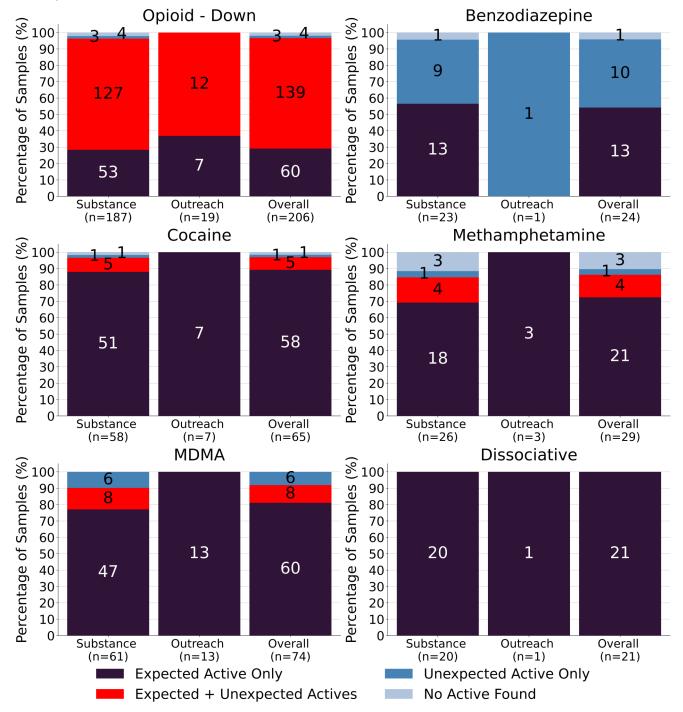


Expected substance	Substance	Outreach	Overall
Opioid Down (fentanyl and/or heroin)	187	19	206
Psychedelic (MDMA, MDA, LSD, 2C-B)	78	16	94
Cocaine (HCl or Base)	58	7	65
Methamphetamine	26	3	29
Benzodiazepine (alprazolam, diazepam, etizolam)	23	1	24
Dissociative (ketamine)	20	1	21
Other Opioid (Dilaudid, oxycodone)	2	1	3
Other (GHB, cannabinoids, "research chemicals")	8		8
Unknown/Missing	28	17	45
Total samples checked	430	65	495

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What did we find?

We tested each sample to determine what active ingredients, adulterants, and cutting agents were present. The majority of samples contained the expected active drug. However, we also detected a number of other notable components that may cause unexpected effects. The figures below illustrate the percentages and numbers of samples tested in each drug category, separated by collection location/method, color coded by their composition. **Dark Purple** regions group samples that were simply as expected with no other notable compounds detected, **Red** shows samples that contained the expected drug *and* were contaminated with an unexpected active, **Dark Blue** groups samples that only contained an unexpected active (the expected drug was not found), and **Light Blue** displays samples where no active compounds were detected.



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What did we find?

Expanding on the figures shown on the previous page, for each drug category and collection location/model, we list the number of samples that contained the expected active and/or other notable components.

Opioid Down	Substance	Outreach		Substance	Outreach
Expected Active Only	53	7	Expected*+ Unexpected	l Active(s) contir	nued
Etodesnitazene	1		Flubromazepam	2	
Fentanyl	51	7	Flubromazolam	1	
Heroin	1		Fluorofentanyl	7	1
Expected* + Unexpected Active(s)	127	12	Hydromorphone	1	
Fentanyl*	123	10	Isotonitazene	1	
Heroin*	10	2	Lidocaine	5	1
Acetylcodeine	5	2	Methamphetamine	1	
Acetylfentanyl	4		MDMA	1	
Acetylmorphine	9	2	Morphine	1	1
Alprazolam		1	Oxycodone	1	1
Benzocaine	1		Phenacetin	2	
Benzodiazepine (undifferentiated) ²	36	1	Xylazine	9	
Carfentanil	5	2	Unexpected Active(s) Only	3	
Cocaine Base	2		Cocaine Base	1	
Cocaine HCl	2		Hydromorphone	2	
Etizolam	35	4	Morphine	2	
Flualprazolam	14	5			

Cocaine (HCI or Base)	Substance	Outreach
Expected Active Only	51	7
Cocaine Base	3	2
Cocaine HCl	48	5
Expected* + Unexpected Active(s)	5	
Cocaine HCI*	5	
Benzocaine	1	
Levamisole	4	
Unexpected Active(s) Only	1	
MDA	1	

Methamphetamine	Substance	Outreach
Expected Active Only	18	3
Methamphetamine	18	3
Expected* + Unexpected Active(s)	4	
Methamphetamine*	4	
Fentanyl	4	
Unexpected Active(s) Only	1	
Cocaine HCl	1	
Data are preliminary. There were missina da	ata for some sa	mnles. Instru

Data are preliminary. There were missing data for some samples. Instruments may not be able to detect all ingredients and certainty of interpretations may vary. Multiple substances may be present in one sample and

substances may be present in trace concentrations. *Expected active component. ¹May be due to limitations of technology to detect certain substances. ²Benzodiazepine (undifferentiated) results are based on a positive benzo strip test and are unconfirmed by paper spray.

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Psychedelics	Substance	Outreach
Expected Active Only	64	16
4-HO-MET	1	
5-MeO-DMT	1	
DMT	4	1
LSD	9	2
Methallylescaline	1	
MDA	4	
MDMA	43	13
Psilocin	1	
Salvia	1	
Expected* + Unexpected Active(s)	8	
Expected* + Unexpected Active(s) Cocaine HCl	8 1	
Cocaine HCl	1	
Cocaine HCl MDA*	1 8	
Cocaine HCl MDA* MDMA*	1 8 7	
Cocaine HCl MDA* MDMA* Unexpected Active(s) Only	1 8 7 7	
Cocaine HCl MDA* MDMA* Unexpected Active(s) Only 3-MMC	1 8 7 7 1	
Cocaine HCl MDA* MDMA* Unexpected Active(s) Only 3-MMC Cocaine HCl	1 8 7 7 1 1	
Cocaine HCI MDA* MDMA* Unexpected Active(s) Only 3-MMC Cocaine HCI Levamisole	1 8 7 7 1 1 1	

Benzodiazepines	Substance	Outreach
Expected Active Only	13	
Alprazolam	13	
Unexpected Active(s) Only	9	1
Benzocaine	1	
Etizolam	8	
Fentanyl	1	
Lorazepam	1	
MDA		1

Data are preliminary. There were missing data for some samples. Instruments may not be able to detect all ingredients and certainty of interpretations may vary. Multiple substances may be present in one sample and

Dissociatives	Substance	Outreach
Expected Active Only	20	1
Ketamine	20	1

Opioid Other	Substance
Expected Active Only	1
Oxycodone	1
Expected* + Unexpected Active(s)	1
Fentanyl	1
Hydromorphone*	1

Other	Substance
Expected Active Only	4
GHB	1
THC	3

Unknown/Missing	Substance	Outreach
Unexpected Active(s) Only	24	14
2C-B	1	
Acetaminophen	1	
Benzodiazepine (undifferentiated) ²	7	4
Clobazam		1
Cocaine Base	2	
Cocaine HCl	1	1
Etizolam	2	
Fentanyl	14	10
Flualprazolam		2
Fluorofentanyl	4	
Hydromorphone		2
Ketamine		1
MDA	1	
MDMA		1
Methamphetamine	3	2
Morphine		1
Oxycodone	1	

substances may be present in trace concentrations. *Expected active component. ¹May be due to limitations of technology to detect certain substances. ²Benzodiazepine (undifferentiated) results are based on a positive benzo strip test and are unconfirmed by paper spray.

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Quantification

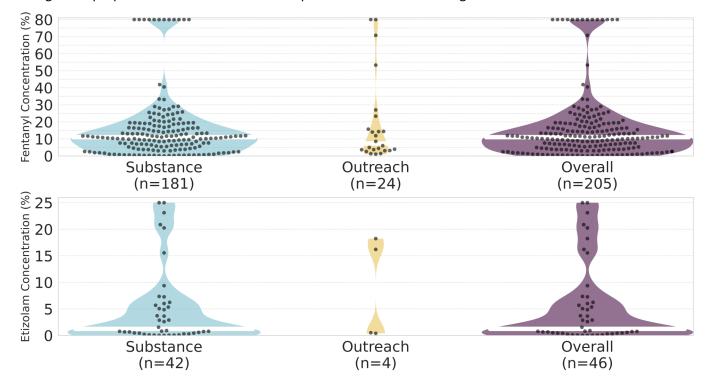
Using paper spray mass spectrometry (PS-MS) data, we were able to quantify low concentration compounds. These aggregate values are inclusive to all expected drug categories in which the active drugs are found. Weight percentage is reported below.

Substance	# Quant.	Median	Min	Max
Fentanyl	205	11.0%	0.1%	>80%*
Etizolam	46	1.2%	0.1%	>25%*
Flualprazolam	21	0.5%	0.1%	2.7%
Fluorofentanyl	12	6.6%	0.2%	70.0%
Heroin	12	51.7%	10.1%	>80%*
Xylazine	8	21.1%	0.1%	26.6%
Carfentanil	7	0.11%	0.06%	2.95%
Isotonitazene	1	2.0%	-	-

^{*}There is a maximum concentration limit that the PS-MS can quantify for each compound of interest. If a sample contains a higher percentage of a compound than the PS-MS's limits, then only the upper limit will be reported. For example, the upper limit of reporting for etizolam on the PS-MS is 25% - any sample containing more than 25% etizolam will be flagged as ">25%".

Distribution of Fentanyl and Etizolam Concentrations

The concentrations of fentanyl and etizolam for every sample quantified, separated by collection location/model, are illustrated below to highlight the variability in the unregulated drug market. **Black Dots** are individual samples, **White Lines** mark the median concentration of the fentanyl/etizolam positive samples checked, and the width of the colored regions is proportional to the number of samples in a concentration range.



Preliminary Results for April 2022

The Vancouver Island Drug Checking Project is based out of the University of Victoria and operates community-wide drug checking services within Victoria, BC. We are continuing to offer drug checking services in response to the dual public health emergencies, and exploring new ways to better reach those who may benefit from this service. We have partnered with Dr. Chris Gill and the team at Vancouver Island University to improve detection and reporting using their methods for the paper spray - mass spectrometer.

See the blog portion of our website to view our more detailed interpretations of our reports.

Our project respectfully acknowledges that we work as visitors on the traditional territory of the Lkwungen (Songhees), Wyomilth (Esquimalt), and WSÁNEĆ (Saanich) peoples of the Coast Salish Nation. We also acknowledge the inextricable links between research, colonization and racism against Indigenous peoples, which continue to this day. Ending the violence faced by people who use substances and the overdose crisis cannot be achieved without facing the legacy through which we have come to be in this territory.

For more information please visit: substance.uvic.ca

We gratefully acknowledge our partners and funders on this project

Our Partners



AVI Health and Community Services

BC Ministry of Health

BC Ministry of Mental Health and Addictions

BC Support Vancouver Island Centre

Vancouver Foundation

Canadian Institute for Substance Use Research



IBM Canada



Lantern Services

PerkinElmer Inc ProSpect Scientific





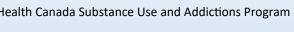
Vancouver Island University

Westgrid

Natural Sciences and Engineering Research Council

Our Funders

Health Canada Substance Use and Addictions Program







Canadian Institutes of Health Research





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